Title: Real Time Quantitative PCR With Intercalating Dye
For Single And Multiplex Target DNA
Inventor: Michael Edward Schaffer et al.
Application No.: To be assigned
Docket No.: MD1080US CNT

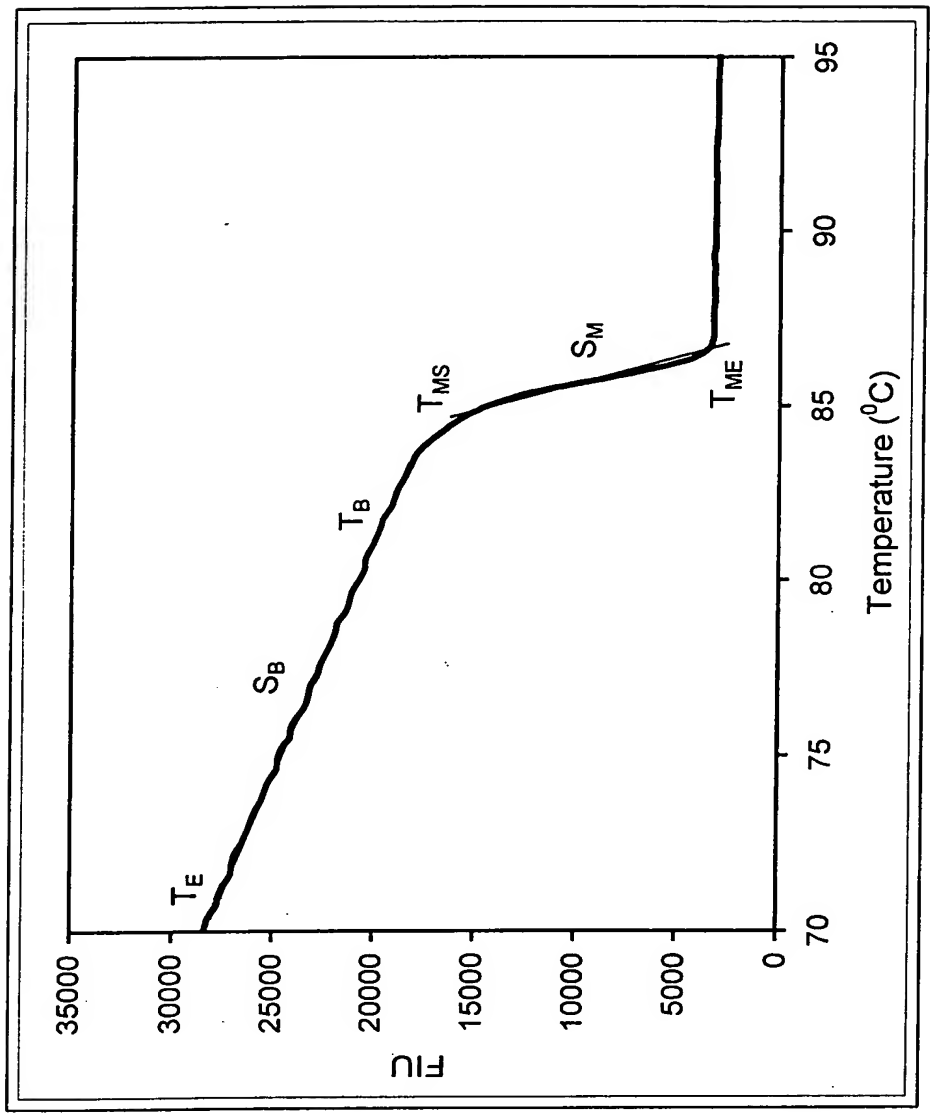

FIG. 1

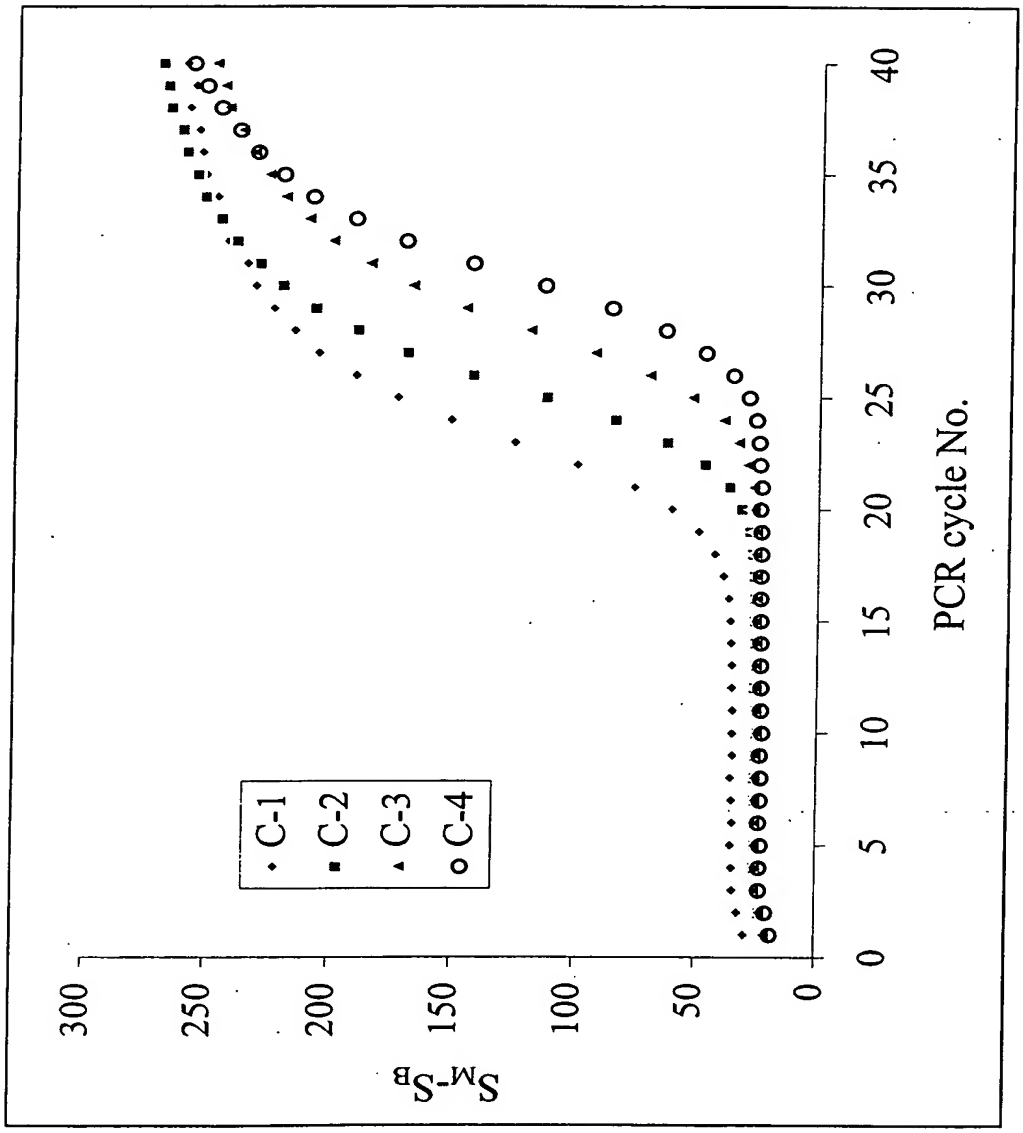
C-1
C-2
C-3
C-4
S_M-S_B
PCR cycle No.
0
50
100
150
200
250
300
0
5
10
15
20
25
30
35
40

FIG. 2

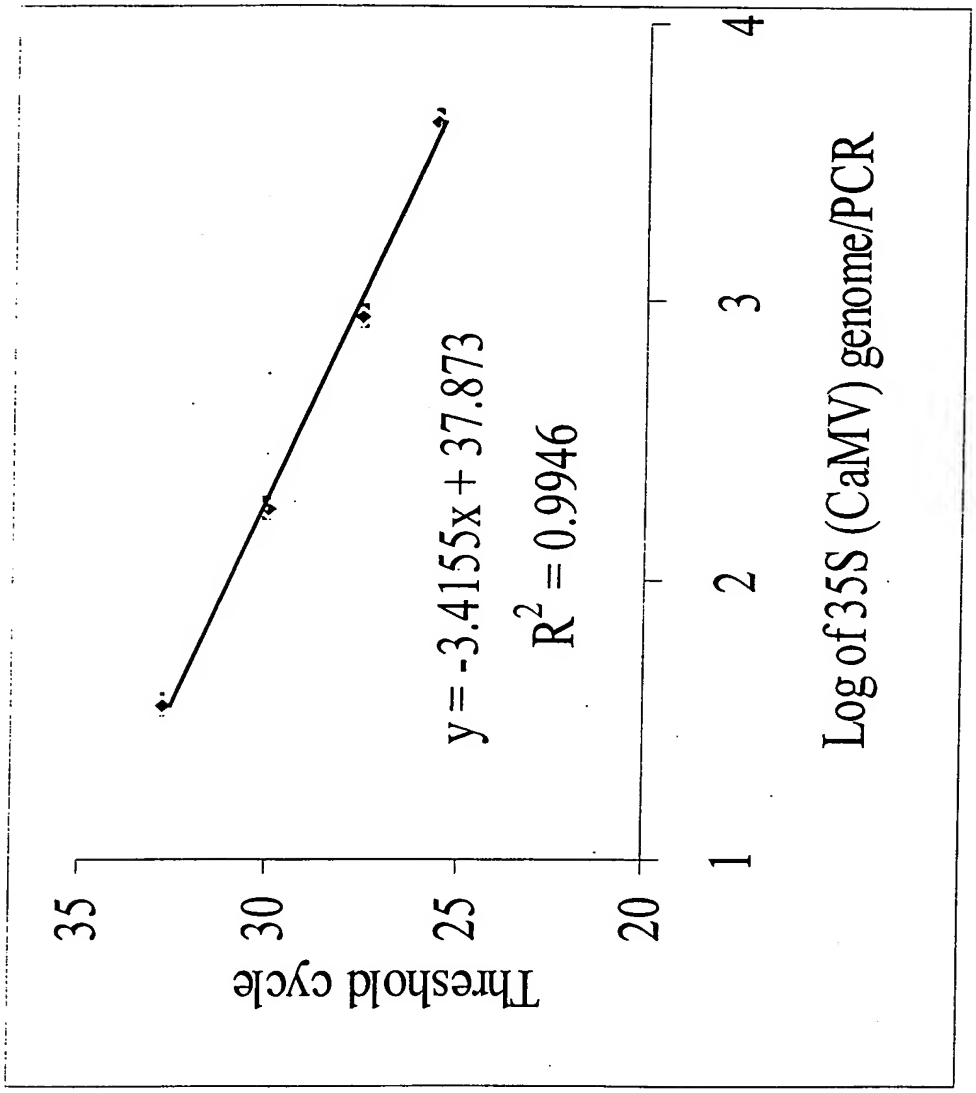
Threshold cycle
35
30
25
20
1
2
3
4
Log of 35S (CaMV) genome/PCR
y = -3.4155x + 37.873
R2 = 0.9946

FIG. 3

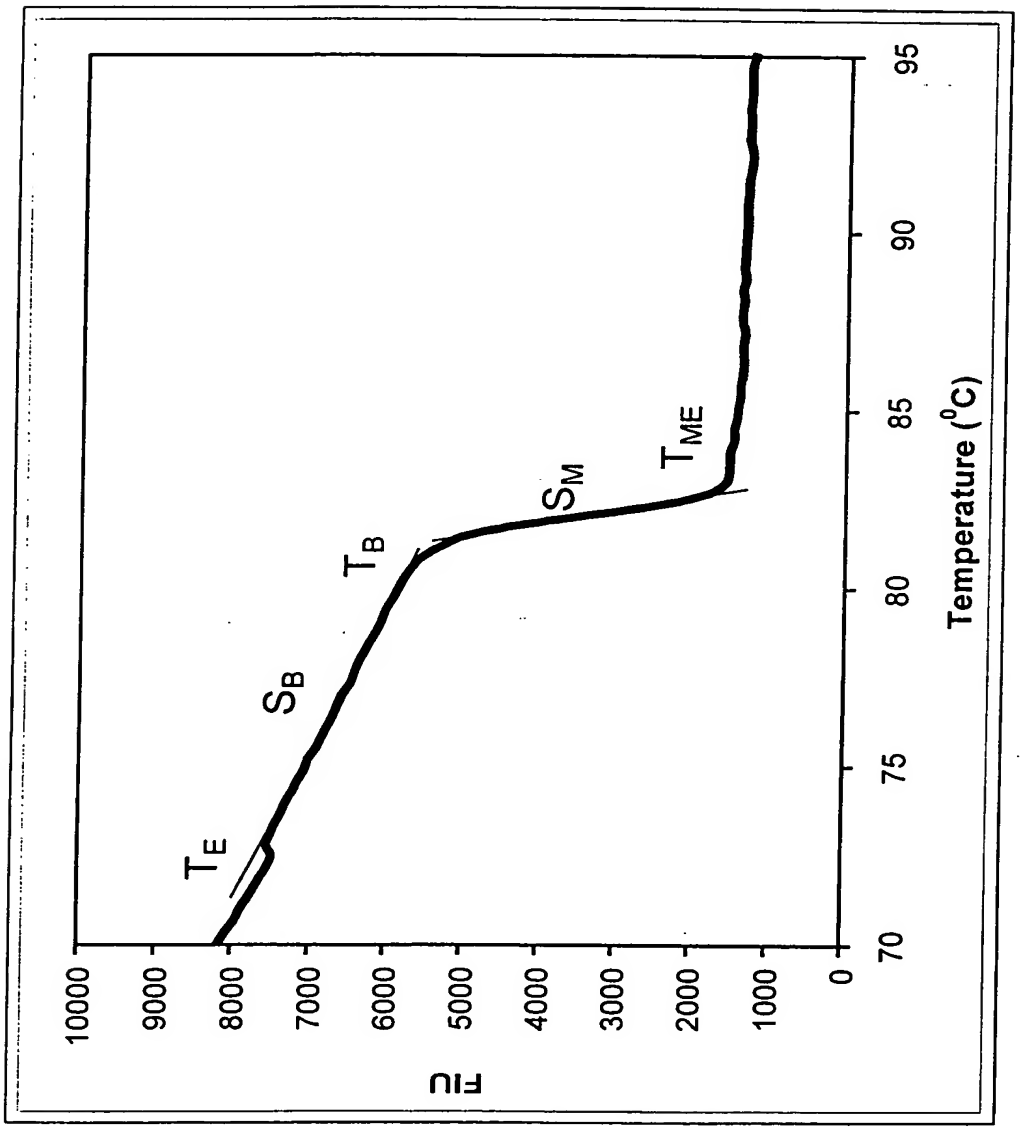
FIU
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
70
75
80
85
90
95
Temperature (°C)
T_E
S_B
T_B
S_M
T_{ME}

FIG. 4

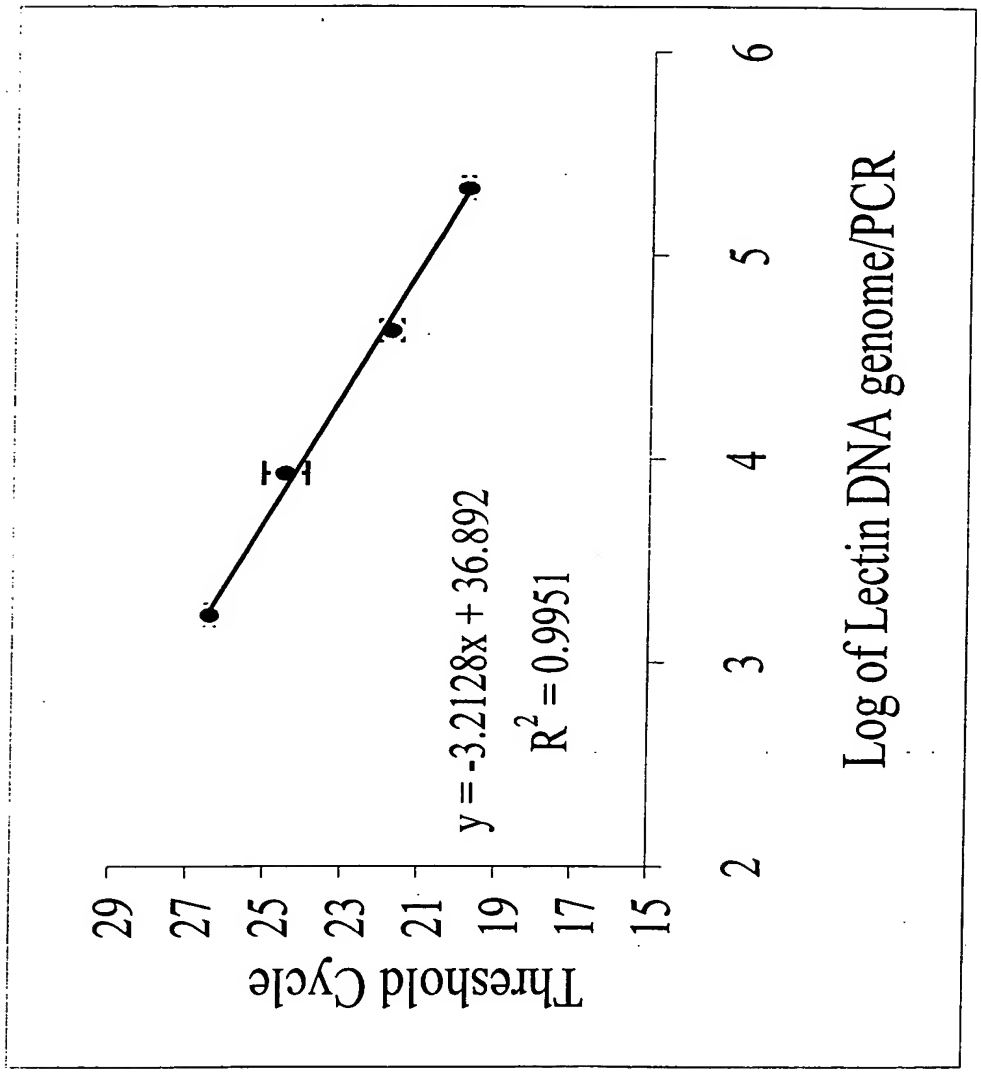
Threshold Cycle
29
27
25
23
21
19
17
15
2
3
4
5
6
Log of Lectin DNA genome/PCR
y = -3.2128x + 36.892
R2 = 0.9951

FIG. 5

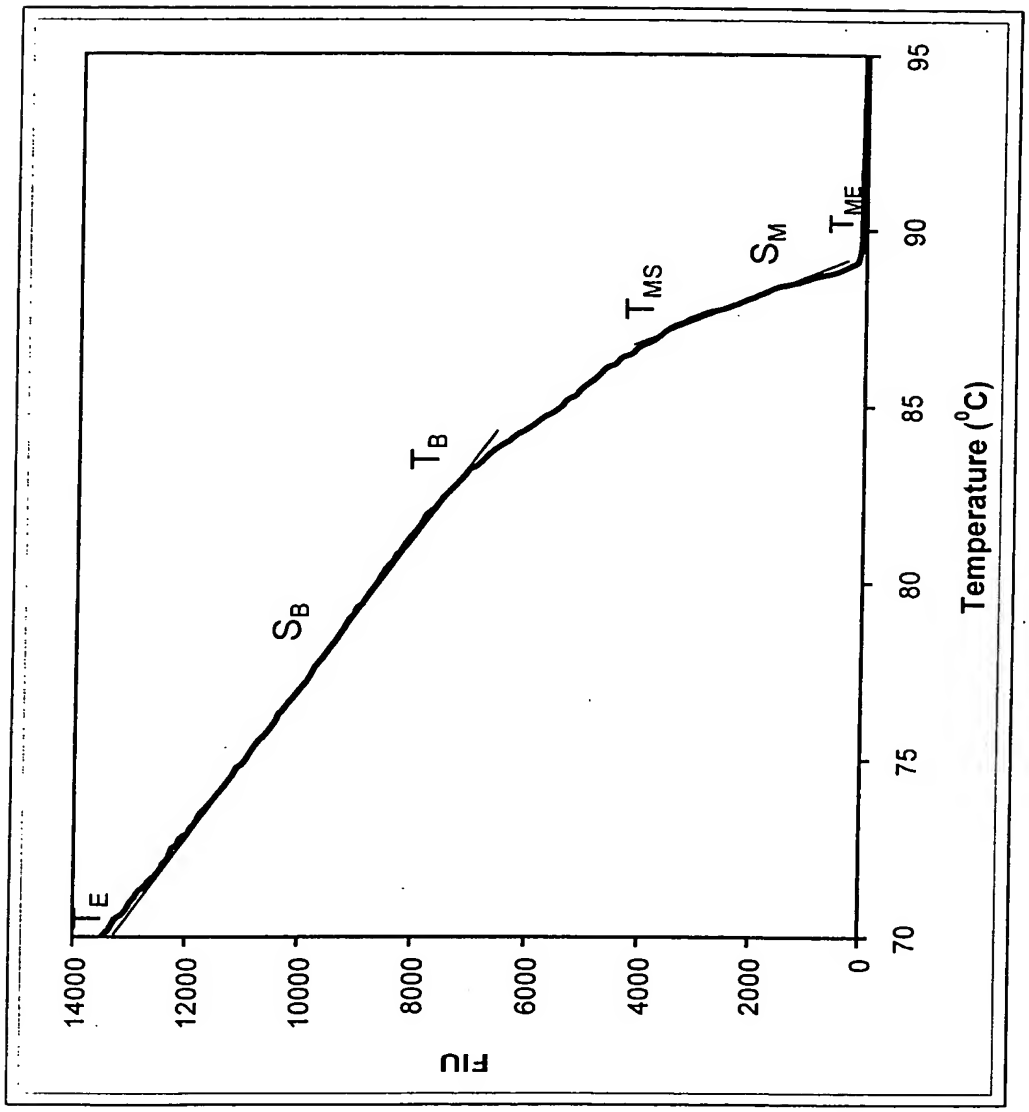
FIU
14000
12000
10000
8000
6000
4000
2000
0
70
75
80
85
90
95
Temperature (°C)
T_E
S_B
T_B
T_{MS}
S_M
T_{ME}

FIG. 6

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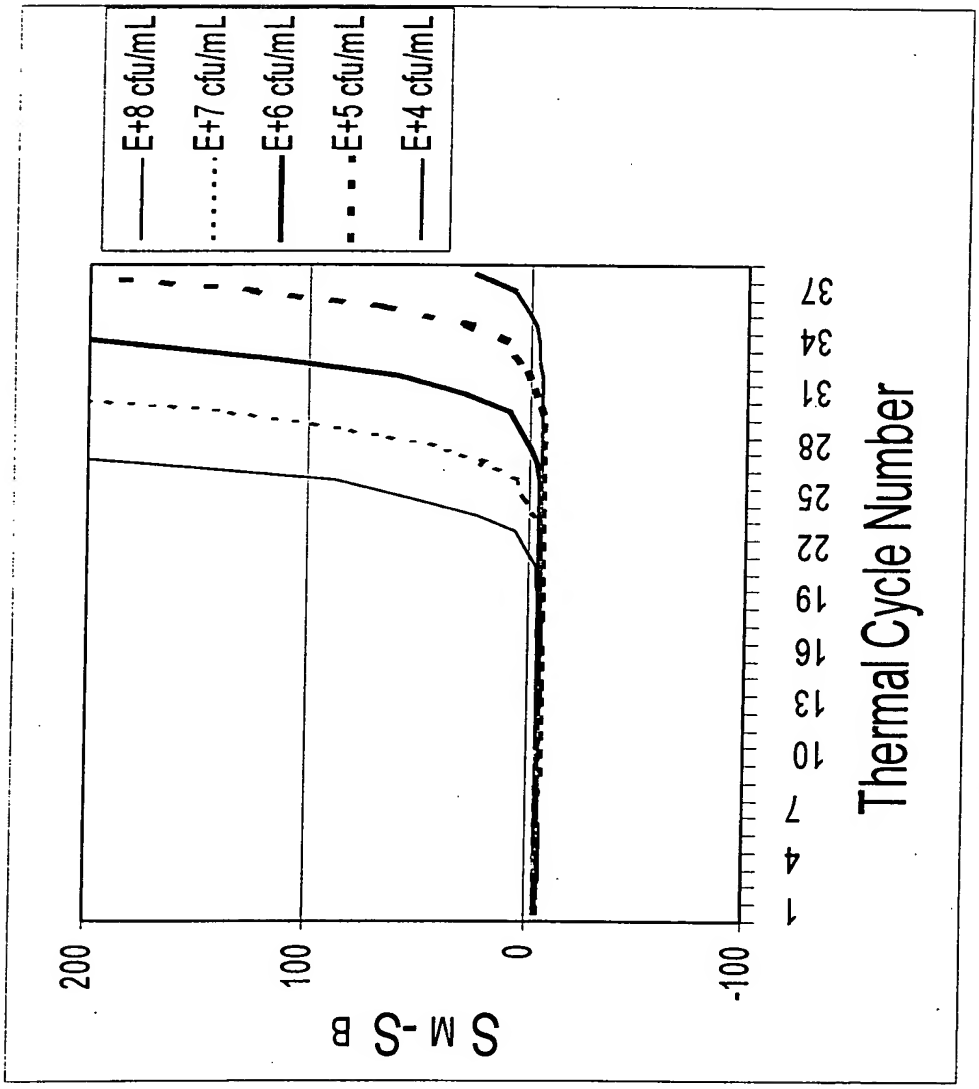

FIG. 7

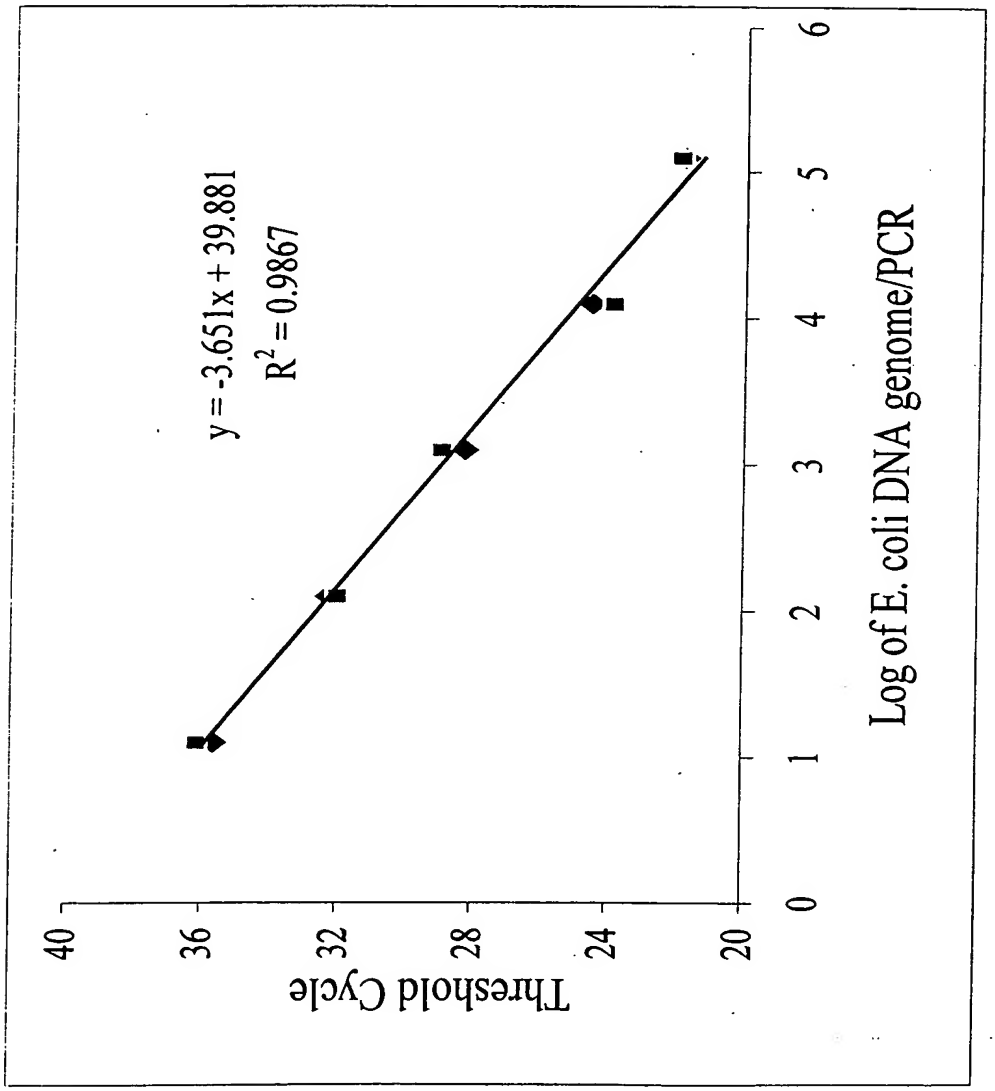
y = -3.651x + 39.881
R2 = 0.9867
Threshold Cycle
40
36
32
28
24
20
0
1
2
3
4
5
6
Log of E. coli DNA genome/PCR

FIG. 8

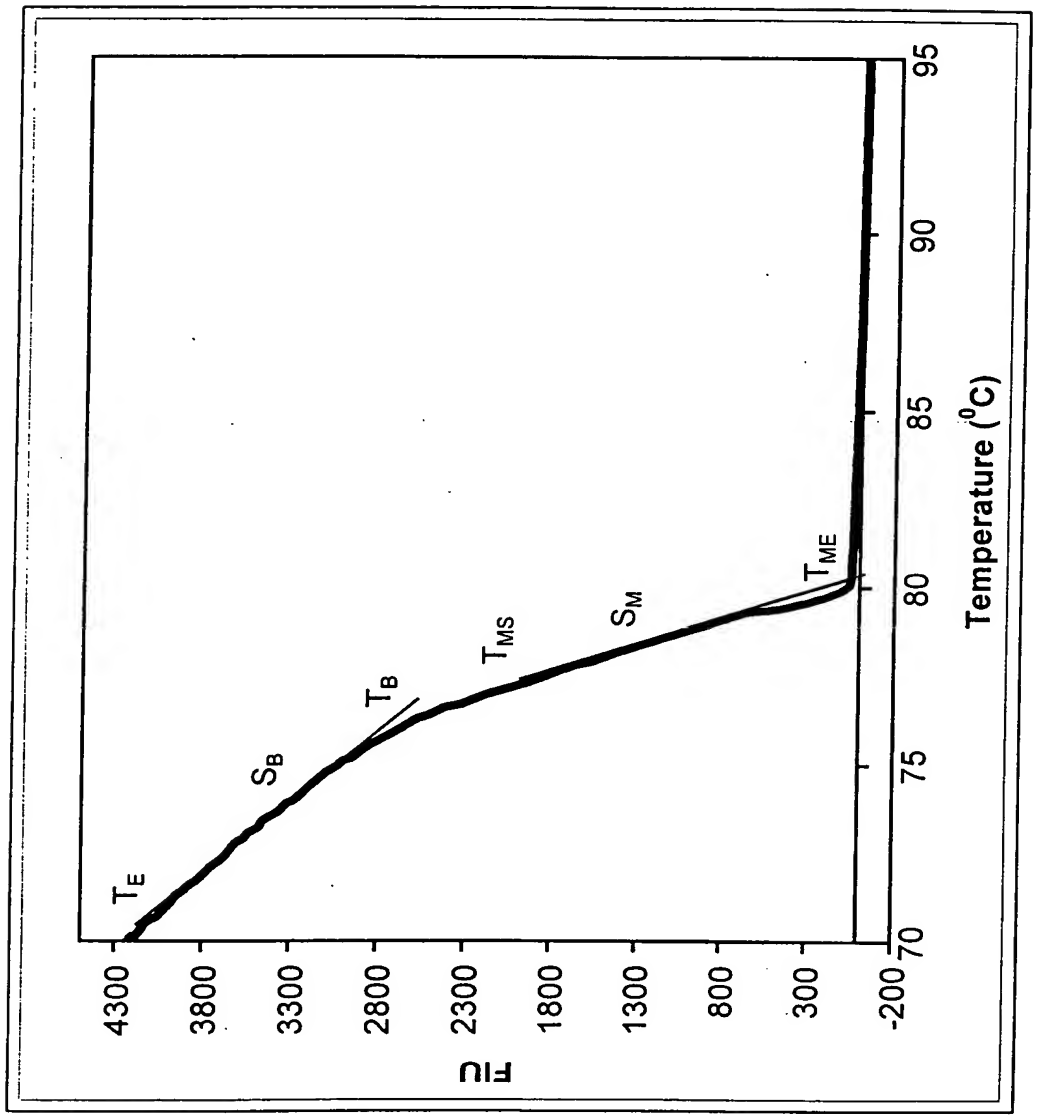
FIU
4300
3800
3300
2800
2300
1800
1300
800
300
-200
70
75
80
85
90
95
Temperature (°C)
T_E
S_B
T_B
T_{MS}
S_M
T_{ME}

FIG. 9

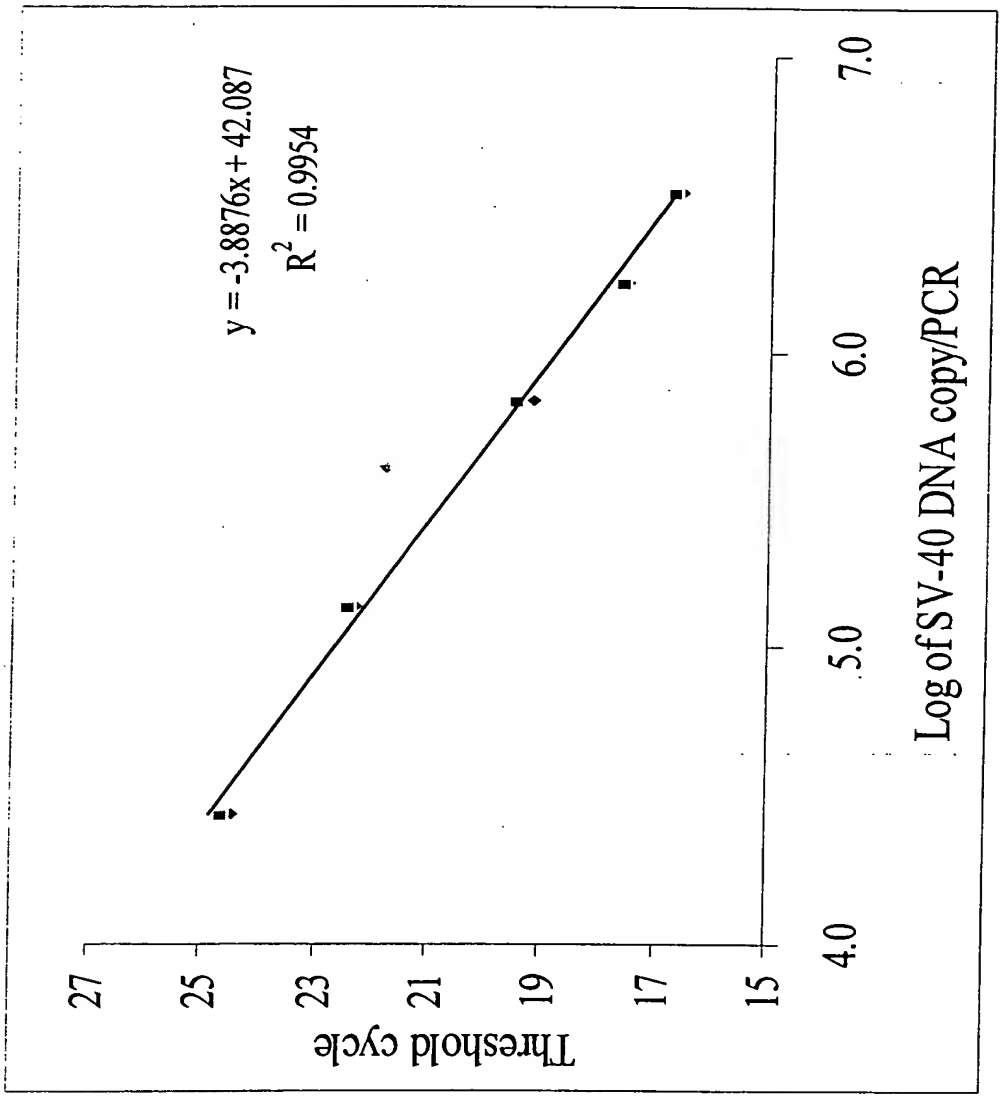
y = -3.8876x + 42.087
R2 = 0.9954
Threshold cycle
27
25
23
21
19
17
15
4.0
5.0
6.0
7.0
Log of SV-40 DNA copy/PCR

FIG. 10

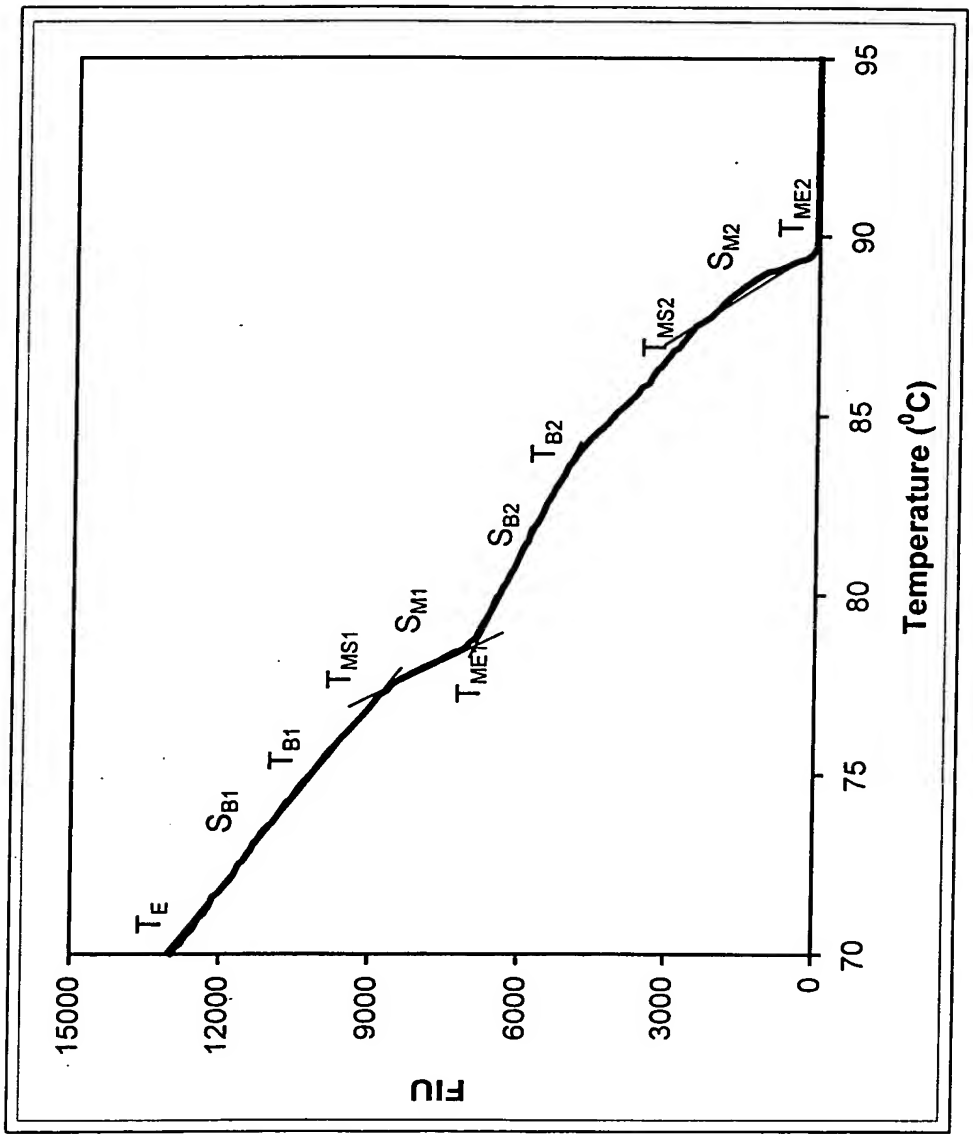
FIU
15000
12000
9000
6000
3000
0
70
75
80
85
90
95
Temperature (°C)
T_E
S_{B1}
T_{B1}
T_{MS1}
S_{M1}
T_{ME1}
S_{B2}
T_{B2}
T_{MS2}
S_{M2}
T_{ME2}

FIG. 11

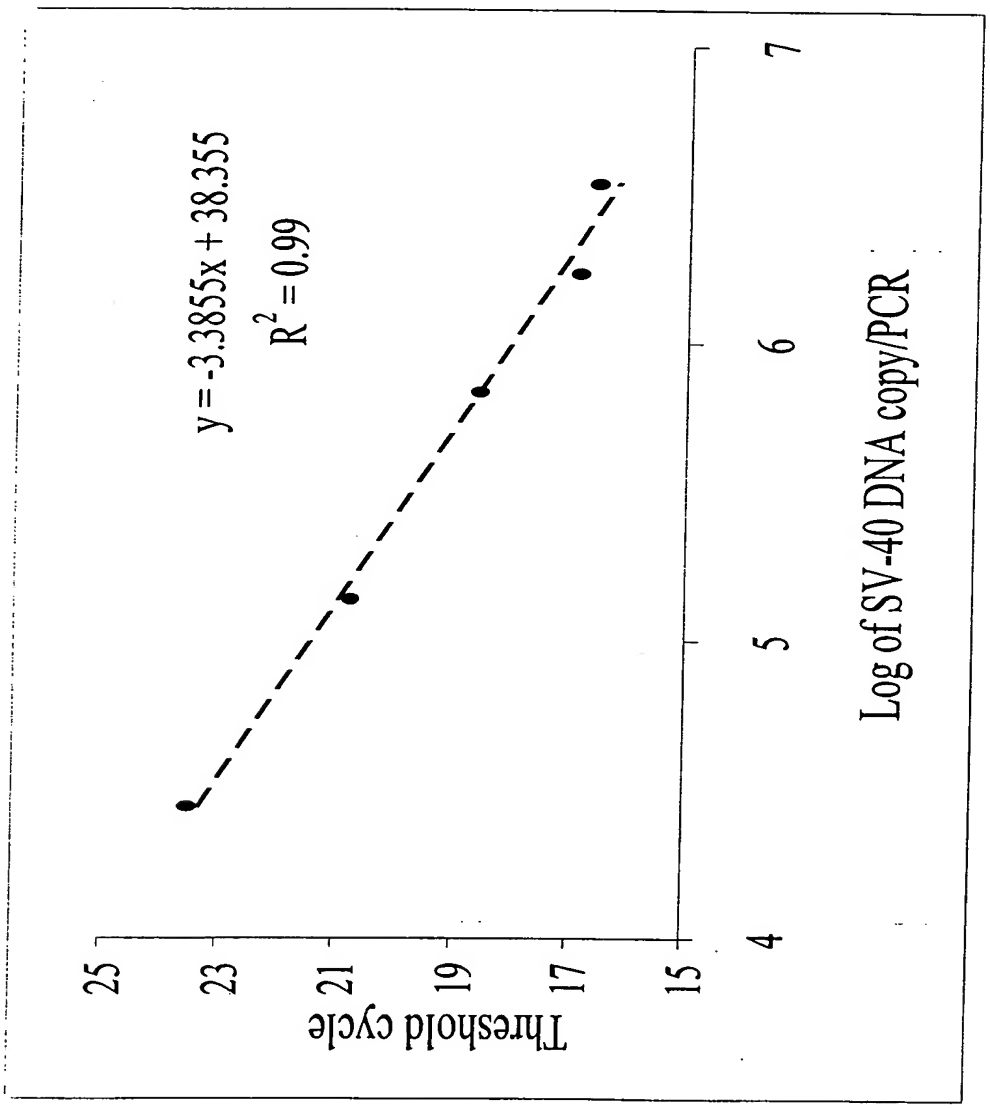
y = -3.3855x + 38.355
R2 = 0.99
Threshold cycle
25
23
21
19
17
15
4
5
6
7
Log of SV-40 DNA copy/PCR

FIG. 12

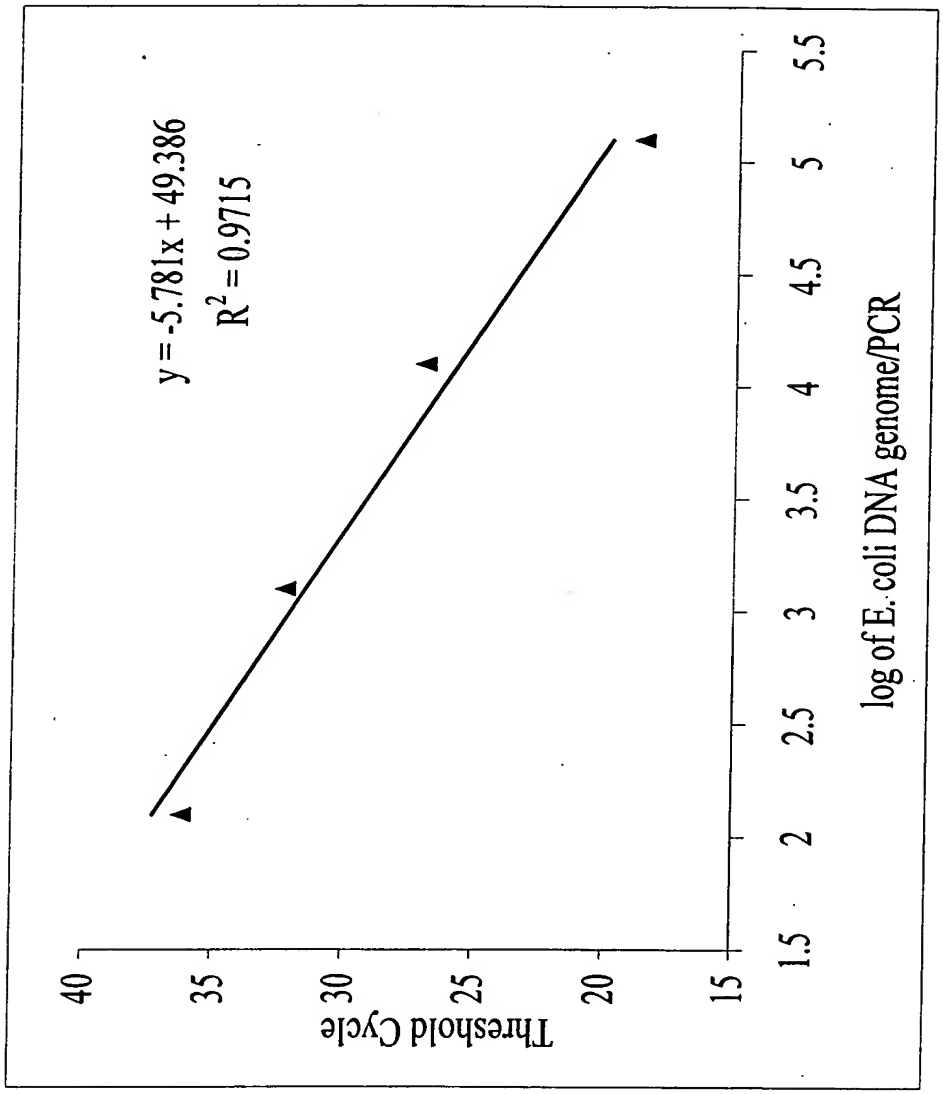
y = -5.781x + 49.386
R2 = 0.9715
Threshold Cycle
40
35
30
25
20
15
1.5
2
2.5
3
3.5
4
4.5
5
5.5
log of E. coli DNA genome/PCR

FIG. 13

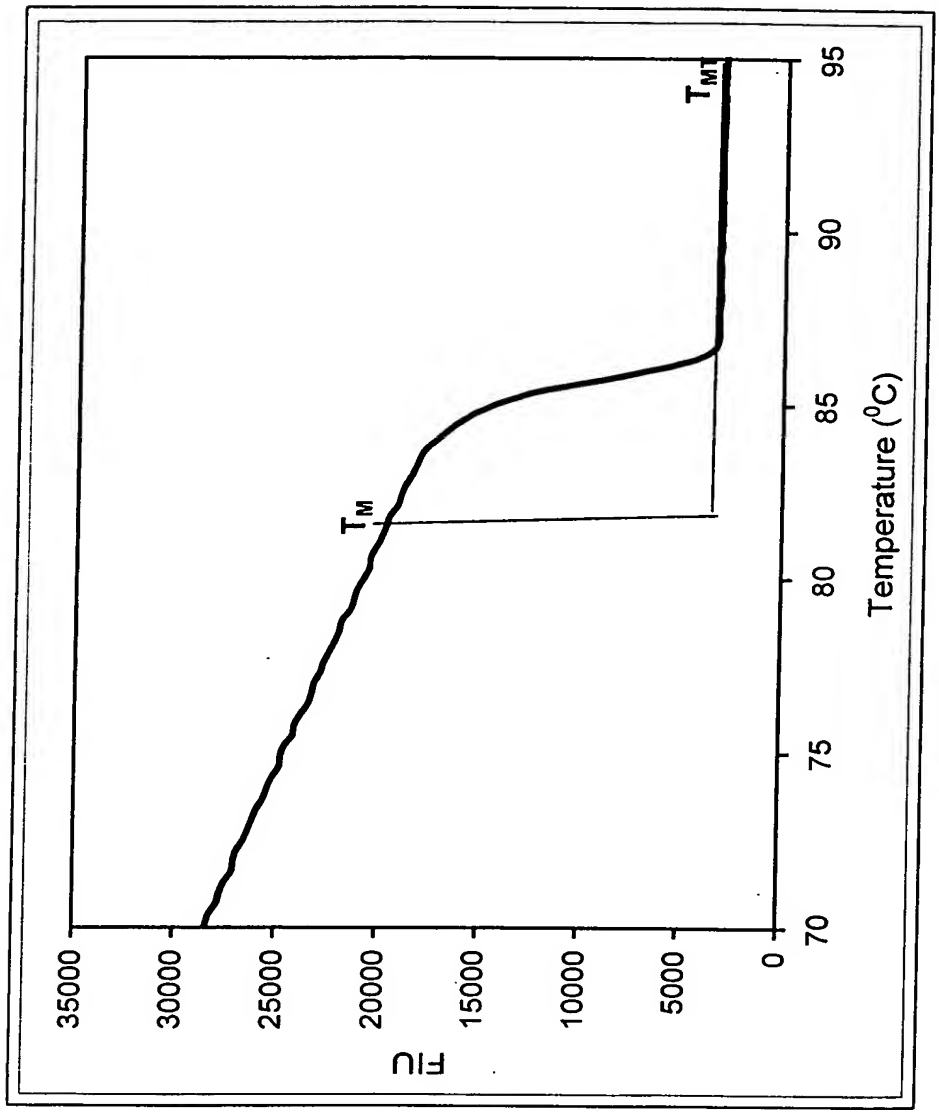
FIU
35000
30000
25000
20000
15000
10000
5000
0
70
75
80
85
90
95
Temperature (°C)
T_M
T_{MT}

FIG. 14

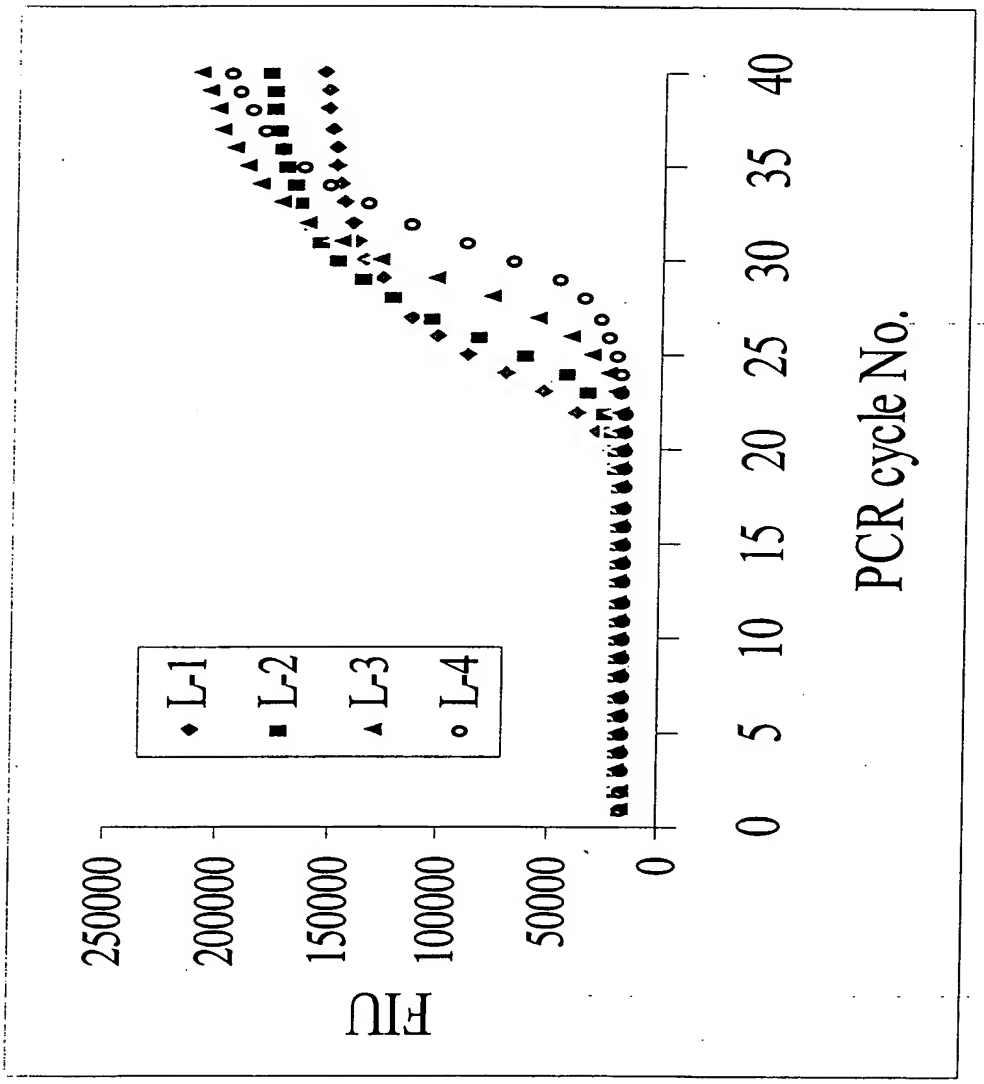
FIU
250000
200000
150000
100000
50000
0
0
5
10
15
20
25
30
35
40
PCR cycle No.
L-1
L-2
L-3
L-4

FIG. 15

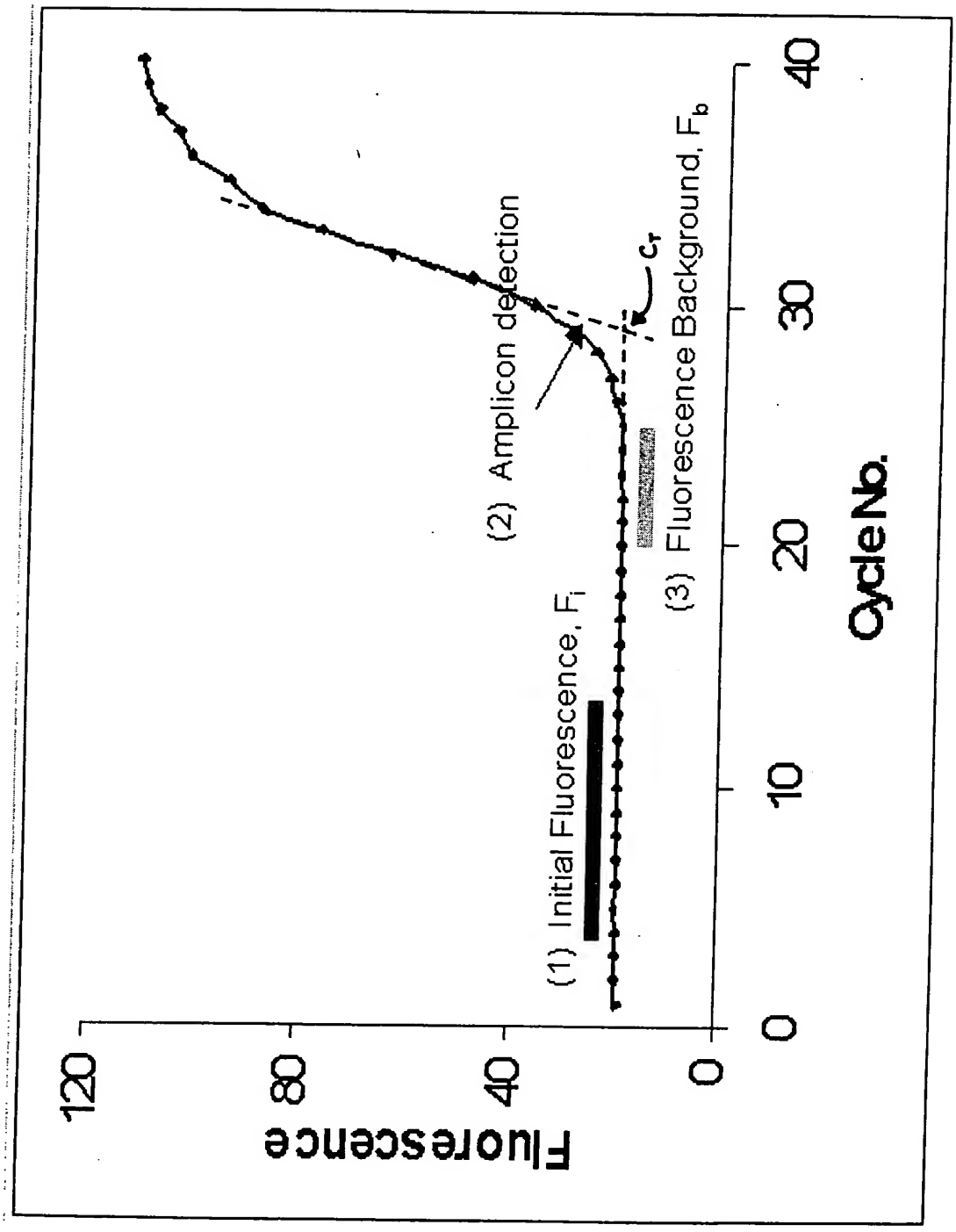
Fluorescence
120
80
40
0
0
10
20
30
40
Cycle No.
(1) Initial Fluorescence, F_i
(2) Amplicon detection
C_T
(3) Fluorescence Background, F_b

FIG. 16